

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-07						R-1 ITEM NOMENCLATURE 0205667N F-14 Upgrade					
COST (\$ in Millions)	Prior Year Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost	1,824.365		10.974	1.487							1,836.826
E1408 F-14 Upgrade	1,824.365		*10.974								1,835.339
E9112 TACL SAR Pod				1.487							1.487
Quantity of RDT&E Articles	Not Applicable										
* The FY2001 budget reflects Congressional Adds of \$9.000 million for Synthetic Aperture Radar Reconnaissance system demonstration executed under E2984 and \$1.000 million for Radar Warning Receiver Antenna Replacement and system enhancement executed under E2985. These Congressional Adds were decreased by \$.301 million and \$.033 million respectively for Congressional undistributed reductions. The FY 2002 budget reflects a \$1.500 million Congressional add for the Tactical All Weather Collection Long Range (TACL) Synthetic Aperture Radar Reconnaissance system (SAR) Pod which has been reduced by \$.013 million for undistributed Congressional reductions.											
A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element provides for the development of improvements to the Navy F-14 squadrons in order to counter the projected threat through the year 2001. The F-14D has increased capability in three major areas: new engine, new digital avionics, and upgraded radar. These changes yield significant improvements in capability and performance, as well as reliability and maintainability, and will facilitate the total integration and exploitation of related programs i.e., Joint Tactical Information Distribution System (JTIDS), Infrared Search and Track System (IRST), and inclusion of Airborne Self-Protection Jammer (ASPJ) in the electronic warfare (EW) suite for the F-14D operational evaluation. A Pre-deployment Update (PDU) program (primarily software) includes air-to-ground ordnance delivery capability, full Link 16 capability, and radar/Electronic Counter-Countermeasures (ECCM) improvements for the F-14D. The PDU program was created because of concurrent development of the F-14D and the above listed common avionics and weapons. It implements the capabilities inherent in systems incorporated during the full scale development (FSD) program and is a planned integral part of the evolution of the F-14D aircraft. F-14 weapons integration supports integration of EW improvements and correction of OPEVAL deficiencies. Funding is also provided for various software upgrades such as Global Positioning System, and accommodates the realignment of Aviation Depot Level Repairables (AVDLR) from Major Range and Test Facility Bases to direct project funding. FY2001 includes a Congressional plus up of \$9 million for Synthetic Aperture Radar (SAR) Pod. These funds were used to demonstrate a podded SAR system on the F-14. Additionally, a \$1 million Congressional plus up is included for Radar Warning Receiver (RWR) Antenna Replacement and System Enhancement. These funds were used to fund the research, development and test costs associated with procuring new RWR antennas system upgrade. The FY 2002 Congressional increase for TACL SAR will be used to conduct flight demonstrations of X-BAND High Resolution Synthetic Aperture Radar (SAR) Pod.											
(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.											

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 1 of 11)

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EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2002</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-07</b>		PROGRAM ELEMENT NUMBER AND NAME 0205667N F-14 Upgrade				PROJECT NUMBER AND NAME E1408 F-14 Upgrade					
COST (\$ in Millions)	Prior Year Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost	1,824.365		*10.974								1,835.339
RDT&E Articles Qty	<b>Not applicable</b>										
<p>** The FY2001 budget reflects Congressional Adds of \$9.000 million for Synthetic Aperture Radar Reconnaissance system demonstration executed under E2984 and \$1.000 million for Radar Warning Receiver Antenna Replacement and system enhancement executed under E2985. These Congressional Adds were decreased by \$.301 million and \$.033 million respectively for Congressional undistributed reductions.</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element provides for the development of improvements to the Navy F-14 squadrons in order to counter the projected threat through the year 2000 and beyond. The F-14D has increased capability in three major areas: new engine, new digital avionics, and upgraded radar. These changes yield significant improvements in capability and performance, as well as reliability and maintainability, and will facilitate the total integration and exploitation of related programs i.e., Joint Tactical Information Distribution System (JTIDS), Infrared Search and Track System (IRST), and inclusion of Airborne Self-Protection Jammer (ASPJ) in the electronic warfare (EW) suite for the F-14D operational evaluation. A Pre-deployment Update (PDU) program (primarily software) includes air-to-ground ordnance delivery capability, full Link 16 capability, and radar/Electronic Counter-Countermeasures (ECCM) improvements for the F-14D. The PDU program was created because of concurrent development of the F-14D and the above listed common avionics and weapons. It implements the capabilities inherent in systems incorporated during the full scale development (FSD) program and is a planned integral part of the evolution of the F-14D aircraft. F-14 weapons integration supports integration of EW improvements and correction of OPEVAL deficiencies. Funding is also provided for various software upgrades such as Global Positioning System, and accommodates the realignment of Aviation Depot Level Repairables (AVDLR) from Major Range and Test Facility Bases to direct project funding. FY2001 includes a Congressional plus up of \$9.000 million for Synthetic Aperture Radar (SAR) Pod. These funds were used to demonstrate a podded SAR system on the F-14. Additionally, a \$1.000 million Congressional plus up is included for Radar Warning Receiver (RWR) Antenna Replacement and System Enhancement. These funds were used to fund the research, development and test costs associated with procuring new RWR antennas system upgrade.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. FY 2001 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> <li>- (U) (\$1.308) Procured Aviation Depot Level Repairables for testing of aircraft.</li> <li>- (U) (\$8.699) Demonstrated Synthetic Aperture Radar Pod on F-14.</li> <li>- (U) (\$0.967) Procured new Radar Warning Receiver Antenna Replacement and System Enhancement.</li> </ul>											

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<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th><u>FY2001</u></th> <th><u>FY2002</u></th> <th><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td>11.122</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments from the FY2002 President's Budget:</td> <td>-0.148</td> <td></td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td>10.974</td> <td></td> <td></td> </tr> </tbody> </table> <p>CHANGE SUMMARY EXPLANATION:</p> <p>(U) Funding: The FY2001 net decrease of \$.148 million consists of a \$.243 million decrease for a Small Business Innovative Research assessment and a decrease of \$.029 million for reprioritization of requirements within the Navy offset by a \$.124 million increase for Strike Master Plan.</p> <p>(U) Schedule: Not applicable.</p> <p>(U) Technical: Not applicable.</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>Line Item No. &amp; Name</u></th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> <th>FY 2004</th> <th>FY 2005</th> <th>FY 2006</th> <th>FY 2007</th> <th>To Complete</th> </tr> </thead> <tbody> <tr> <td>APN-5</td> <td>27.8</td> <td>6.9</td> <td>3.7</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>(U) Related RDT&amp;E:            (U) PE 0205604N (Tactical Data Links)            (U) PE 0604270N (EW Development)</p>									<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:	11.122			(U) Adjustments from the FY2002 President's Budget:	-0.148			(U) FY 2003 President's Budget Submit:	10.974			<u>Line Item No. &amp; Name</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	APN-5	27.8	6.9	3.7	0	0	0	0	0
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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2002</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-07</b>	PROGRAM ELEMENT NUMBER AND NAME 0205667N F-14 Upgrade	PROJECT NUMBER AND NAME E1408 F-14 Upgrade
<p>(U) D. ACQUISITION STRATEGY: Not applicable.</p> <p>(U) E. SCHEDULE PROFILE: Not applicable.</p>		

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Exhibit R-3 Cost Analysis (page 1)								DATE:				
APPROPRIATION/BUDGET ACTIVITY								February 2002				
RDT&E, N / BA-07			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
			0205667N F-14 Upgrade			E1408 F-14 Upgrade						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
AMRAAM Int.	SS/CPFF	Northrup Grumman,	9.924								9.924	9.924
		Bethpage, NY										
BLK 1/JDAM	SS/CPFF	Northrup Grumman,	6.506								6.506	6.506
		Bethpage, NY										
FSD Cont	SS/CPFF	Northrup Grumman,	994.378								994.378	994.378
		Bethpage, NY										
PDU	WX	NAWC Pt. Mugu CA	219.984								219.984	
Miscellaneous - Contracts	Various	Various	3.154								3.154	3.154
Miscellaneous - In House	Various	Various	26.650								26.650	
Repair of Repairables	WX	Various	11.078								11.078	
FY95 and other			551.354								551.354	
RWR (Congressional plus up)	SS/FFP	BAE, Lansdale, PA		0.967	06/01						0.967	0.967
SAR (Congressional plus up)	SS/FFP	Raytheon, El Segundo, CA		4.150	08/01						4.150	4.150
SAR (Congressional plus up)	WX	NAWCAD, Pax River, MD		0.727	06/01						0.727	
Subtotal Product Development			1,823.028	5.844							1,828.872	
Remarks:												

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Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 5 of 11)

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## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: <b>February 2002</b>				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RD&amp;E, N / BA-07</b>			0205667 F-14 Upgrade			E1408 F-14 Upgrade						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PDU Systems Engineering/Test and Evaluation	WX	NAWC Pt Mugu CA	1.337	1.313	12/00						2.650	
SAR (Congressional plus up)	SS/FFP	Lockheed Martin, Orlando FL		3.286	08/01						3.286	3.286
SAR (Congressional plus up)	WX	NAWCAD, Pax River, MD		0.531	06/01						0.531	
Subtotal T&E			1.337	5.130							6.467	
Remarks:												
Subtotal Management												
Remarks:												
Total Cost			1,824.365	10.974							1,835.339	
Remarks:												

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Exhibit R-2, RD&E Budget Item Justification  
(Exhibit R-2, page 6 of 11)

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APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-07</b>		PROGRAM ELEMENT NUMBER AND NAME 0205667N F-14 Upgrade				PROJECT NUMBER AND NAME E9112 TACL SAR					
COST (\$ in Millions)	Prior Year Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost				<b>*1.487</b>							<b>1.487</b>
RDT&E Articles Qty	<b>Not applicable</b>										
<p>* The FY 2002 budget reflects a \$1.500 million Congressional add for the Tactical All Weather Collection Long Range (TACL) Synthetic Aperture Radar Reconnaissance system (SAR) Pod which has been decreased by .013 million for an Undistributed Congressional reduction.</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element provides for the development of improvements to the Navy F-14 squadrons in order to counter the projected threat through the year 2000 and beyond. The F-14D has increased capability in three major areas: new engine, new digital avionics, and upgraded radar. These changes yield significant improvements in capability and performance, as well as reliability and maintainability, and will facilitate the total integration and exploitation of related programs i.e., Joint Tactical Information Distribution System (JTIDS), Infrared Search and Track System (IRST), and inclusion of Airborne Self-Protection Jammer (ASPJ) in the electronic warfare (EW) suite for the F-14D operational evaluation. A Pre-deployment Update (PDU) program (primarily software) includes air-to-ground ordnance delivery capability, full Link 16 capability, and radar/Electronic Counter-Countermeasures (ECCM) improvements for the F-14D. The PDU program was created because of concurrent development of the F-14D and the above listed common avionics and weapons. It implements the capabilities inherent in systems incorporated during the full scale development (FSD) program and is a planned integral part of the evolution of the F 14D aircraft. F-14 weapons integration supports integration of EW improvements and correction of OPEVAL deficiencies. The FY 2002 Congressional increase for TACL SAR will be used to conduct flight demonstrations of X-BAND High Resolution Synthetic Aperture Radar (SAR) Pod.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. FY 2002 PLANS:</p> <p>- (U) (\$1.487) Conduct flight demonstrations of X-BAND High Resolution Synthetic Aperture Radar Reconnaissance system Pod on F-14.</p>											

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<p>(U) D. ACQUISITION STRATEGY: Not applicable.</p> <p>(U) E. SCHEDULE PROFILE: Not applicable.</p>		

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 10 of 11)

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-07			0205667 F-14 Upgrade			E9112 TACL SAR Pod						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
TACL SAR (Congressional plus up)	SS/FFP	Lockheed Martin, Orlando FL				1.187	04/02				1.187	1.187
TACL SAR (Congressional plus up)	WX	NAWCWD Pt. Mugu, CA				0.300	04/02				0.300	
Subtotal T&E						1.487					1.487	
Remarks:												
Subtotal Management												
Remarks:												
Total Cost						1.487					1.487	
Remarks:												